NORDflam

MANUAL
AND WARRANTY CARD

STOVES

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1. General information

Thank you for purchasing a NORDflam fireplace stove.
Prior to using the stove, please read the hereby manual carefully. For further information about this stove, please visit our website: **www.nordflam.pl**.

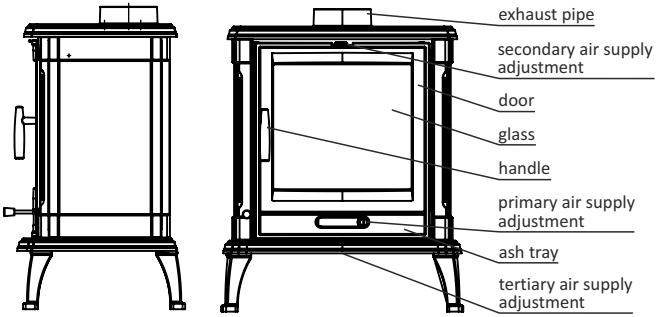

Fig.1. *Fireplace stove schematics.*

1.1. Fireplace stove intended use

The fireplace stove is used for heating residential rooms and recreation facilities.

1.2. Provisions of law

Provisions of law regarding fireplace inserts:

- Construction law Journal of Laws No 89 pos. 414 from 1994 – Bill from 07.07.1994. as amended,
- Ministry of Infrastructure regulation dated 12.04.2002 for technical conditions regulation the buildings and its positions – Journal of Laws no. 75 from 2002, pos. 690 as amended,
- EN 13240 standard: „solid fuel room heaters. Requirements and tests."

2. Selecting the device

When selecting the device appropriate for the interior, apart from its aestheticval values, it is necessary to meet the regulations of the Minister of Infrastucture regulations from 12.04.2002 (Journal of Law 02.75.690 as ammended) and the applicable provision of the construction law. Selection of the output ofthe device depends on the insulation level of the interior and the heated area. It is accepted that for sufficiently insulated room, 1 kW of output is sufficient for heating 10m2 with the standard height of 2,5 m. It is required under the conditio of the loss of warranty to choose the output of the device appropriety for the area of the heated room.

3. Installation

Installation of the fireplace stove must be performed in accordance with the applicable laws, norms and standards, recommendations of this manual as well as the construction principles. Installation must be performed by a qualified installer or a company. National and local terms must be met.

3.1. Chimney ducts

Each device should be connected to a separate chimney duct in accordance with applicable law. It is advised that:

- the minimum height of the chimney is equal to 3.5-4 m, optimal height is 5-6 m, measuring from the bottom of the furnace,
- the chimney duct is airtight, with the same diameter throughout the length and protrudes approx. 0.5 m above the roof ridge of the building, in order to prevent any interference in the draft,
- in exceptional cases (II & III wind load zone, due to local topography) should use chimney cowls to prevent the reverse draft.

Attention!

In cases when the chimney ducts:

- are of smaller size and diameter than recommended,
- are in buildings located in a spot at a disadvantage (i.e. , surrounded by tall buildings, buildings in the valleys),
- are tilted vertically and/or contain long horizontal parts,

it may lead to the lack of the desired vacuum (draft) in a duct, which will not ventilate the exhaust, and as a result, the device may emit smoke into the interior of the room.

Before installing the fireplace stove it is necessary to get feedback determining the draft strength of the chimney duct chimney and the possibility of using the existing chimney duct to to connect the fireplace insert.

It is assumed that the strength of the draft in the exhaust pipe should be 12 +/-2 Pa. The exhaust pipe with the draft above 12 Pa can lead to overheating of the furnace and loss of the warranty. Minimum draft should be at least 6 +/-1 Pa.

For correct use of the furnace, the device must be connected to the chimney as per the applicable provisions of law. The inlet of the chimney duct should be located in the room where the stove is installed. Use the steel pipe of 1,5 mm or 2 mm thickness. The connecting pipe cannot protrude from the chimney duct. The chimney inlet should be fixed with the insetin and the rosette. Precision and the correct connections are important.

3.2. Ventilation and air access

In rooms with solid fuel furnaces with gravity fumes extraction it is prohibited to use mechanical ventilation devices.

Exception: heating devices adapted for heat recovery systems.

When using the fireplace stove, a sufficient amount of air needs to be supplied to the room the fireplace stove is in. The interiors with the functional fireplace stove should have the air supply to the furnace of min. 10 m3/h to 1 kW of nominal output of the fireplace stove. Insufficient air causes incomplete combustion of the fuel and the exhaust gases containing carbon monoxide may cause smoking to the interior of the house. This is dangerous to life and health, reduces the output of the fireplace insert and does not constitute the basis for warranty claim. The inlet grates of the ventilation system must be secured from closing on its own.

3.3 Fireplace stove installation

Prior to installation, check if it is complete, check the operation of all the mechanisms and the durability of the surround.

Installing the stove, it must be remembered:

- to place the stove on the surfaces with enugh carrying capacity,
- remove any third elements and securing elements,
- ensure the sufficient distance required to clean the fireplace and the connector,
- the stove must be placed on the inflammable surface extending for min. 0,4 m from the stove and min 0,2 m measuring from the sides and the back of the stove (See Fig 2),
- the stove must be placed min 2 m away from the flammable materials which could be deformed and/or damaged bu high temperaturę (furniture, wood panels, tapestries etc.) and no closer than 0,6 m from building construction elements, protected from heat and/or flames with applicable inflammable materials.

After installation the furnace it must be accepted by qualified chimney sweeper and acceptance protocol must be made and signed.

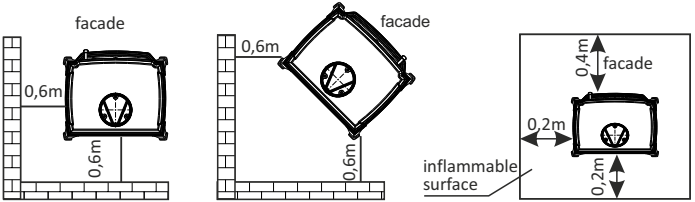

Fig.2. *Safe distance from the stove.*

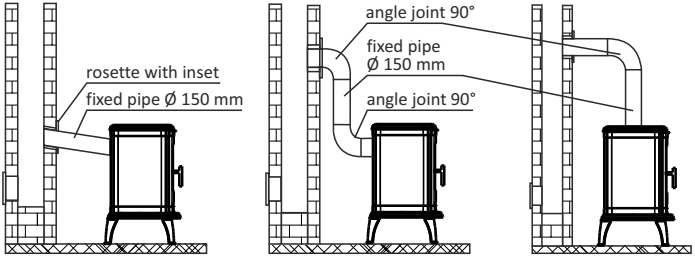

Fig.3. *Schematics of fireplace stove connection.*

4. First burning

Prior to the first burning, remove all the stickers and equipment located in the ash tray and/or the furnace and check the placement of the movable parts of the furnace such as the deflector and the fireguard.

During the first burning in the stove, maintain minimal temperature and open the stove doors slightly (approx. 1- 2 mm) so the sealing material (the seal) does not fuse with the paint. The paind shall become solid only after a few hours of burning in the stove. All the materias must gradually adjust to the high temperature. During the first burning, each stove emmits an unpleasant smell caused by the hardening of the paint. During the smell emmisions it is advisable to thoroughly air the room the stove is in. During the heating and cooling of the stove the accoustiv sounds can occur – it does not represent any fault of the device.

5. Usage

5.1. Safety

In the course of operation of the device, you must take special care due to the high temperature, risk of burns and the possibility of fire:

- a thermal glove supplied by the manufacturer must be used while using the heating device,
- children must not be allowed to come in the direct contact with the heating device - adult supervision is required when children are close to the device,
- it is forbidden to disassemble and perform any structural changes of the fireplace insert,
- do not use water to extinguish the furnace,
- the stove must not be overheated,
- it is advised to install the carbon level sensor in the room where the heating device is installed,
- it is forbidden to leave the heating device unsupervised while the fire is live,
- it is forbidden to use the device to dry fabrics (i.e. clothes) and to keep the fabrics in its proximity,
- it is forbidden to ignite the fire in the fireplace insert that is not installed,
- during normal use of the fireplace insert, its doors must remain closed at all times.

In case of the sooth ignite, notify the closest Fire Station and chimney sweeper. Until their arrival try to put out the fire using powder extinguisher, directing the spray directly to the chimney duct.

5.2. Igniting the fire

Ignition must take place with open primary and secondary air adjustments. Use paper, small pieces of wood or special ignition chemicals for igniting the fire. Uder no circumstances use flammable liquids such as fuel and oil for ignition.

5.3. Adjusting the air supply

The burning process should be adjusted with the designated manipulators. Depending on the model, the fireplace stove has three adjustible air supplies (primary, secondary and tertiary).

The primary air supply supplies the air under the horizontal grill and is used for igniting the fuel. The primary air is adjusted by sliding, the adjustable part located on the door facade.

The secondary air supply is located above the doors of the stove. The secondary air supporth the combustion of the gases in the fumes and protects the glass from getting overly dirty at the same time. In some models of the stoves the secondary air inlet can be unadjstable and is performed via a gap in the upper Edge of the glass.

Tertiary air supply flows into the furnace from the orifices in the back of the inner wall of the furnace. It burns further the gases created in the burning proces. The strenght of the tertiary air is sufficient enough to create additional deflector efferc, limiting the heat loss.

During ignintion, when the draft is too weak, the the primary air adjustment must remain open, secondaty air adjustment open in half and the tertiary air adjustoment closed. After heating the chimney the correct burning prcess takes place with primary air adjustment closed, half-closed secondary air adjustment and adjusting only the tertiary air supply.

The primary, secondary and tertiary air adjustments must be closed when not using the stove. It prevents uncontrollable air loss from the room when not using the stove and prevents emitting a specific smell from the chimney ducts into the rooms when the reverse draft occures.

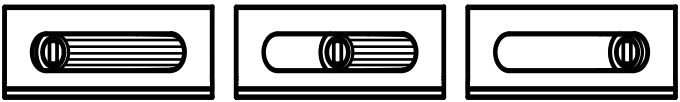

Fig. 4. *The example adjustment of the air supply to the furnace (ash tray facade).*

5.4. Fuel

Theo only acceptable fuel to be used is seasoned wood or wood briquette. The net calorific value of wood is on average 3,5 - 3,7 kW/kg with the moisture content of below 20%. Only wood with moisture content not exceeding 20% can be used for burning. The moisture content is achieved after approximately 2 years of dry storage . The freshly cut wood has the moisture content of 50-60%. Apart from increased wood use (twice as much) burning of freshly cut wood can lead to corrosion of the elements of the insert, glass getting dirty and faster settling of the sooth (creosote) in the insert and in the chimney duct. It is recommended for single fuel loading not to exceed the height of 1/3 of the height of the furnace. It is unacceptable to use of materials other than those recommended, in particular waste materials and flammable liquids.

Dependency between the calorific value of the wood and its moisture level		
Wood condition	**Water content**	**Calorific value**
Freshly cut	50-60%	2,0 kWh/kg = 7,2 MJ/kg
Stored in the summer	25-35%	3,4 kWh/kg = 12,2MJ/kg
Stored for a few years	15-25%	4,0 kWh/kg = 14,4 MJ/kg

6. Maintenance and cleaning

The stove must be cleaned regularly, with the exhaust pipes in particular. It is advised to perform an inspection of the furnace by the qualified person or a company at least twice a year. The chimney ducts must be checked for being airtight and cleaned by a chimney sweeper 4 times per year. The maintenance check and cleaning of the chimney duct must be performed according to the applicable provisions, with particular reference to potential obstructions to the chimney ducts (i.e. clogging due to a bird nest, fallen leaves etc.)

Cleaning of the fireplace glass only allowed using dedicated cleaning products.. It is advised to clean the glass regularly in order to avoid permanent stains/dirt. It is advised to use liquid cleaning products so as to prevent the seals and/or sealants to soak them in. Ash should be removed before a thorough filling of the ash tray, so that the ash does not block the air flow and cooling the grate in the furnace.

Maintenance works and cleaning must be conducted when the stove is cold. It is advised to replace the sealing ropes after the end of each heating season.

7. Spare parts

Only the original spare parts available from the distributor of the fireplace inserts must be used.

Potential sources of furnace malfunction

Consequences	Possible origin of the fault	Remedies
Droplets, water condensing in the furnace	Burning of wet wood with reduced burning and closed damper Water going down a chimney duct	Use only recommended fuel Secure the chimney outlet
Damaging the sealing ropes of the glass and the doors	Using too much of too strong fireplace glass cleaning products	Use appropriate amount of dedicated fluids to clean the fireplace glass so as not to dribble on the sealing ropes
Excessive wearing of the moving cast-iron parts	Insufficient ventilation of the furnace, lack of ventilation of the grill via the ash tray, inadequate fuel	Regularly empty the ash tray, check the air circulation around the furnace, enlarge the orifices and air grates
Glass gets dirty fast	Lack of correct draft. lack of external air supply, using wet wood	Check the compatibility of the installation with the regulations, ensure air supply to furnace (i.e. air grate 20x20 cm), use dry seasoned wood
Insufficiently heated room	Bad quality wood, insufficient heat from the furnace, choice of the right output of the fireplace insert to the size of the room	Use the recommended fuel, check the air circulation around the furnace - air grates
Smoking into the interior of the room while burning	Inappropriate chimney draft	Check the chimney duct, its compliance with the regulations, clean the chimney duct, install the
Smoking into the interior of the room while igniting	Cold chimney duct	Pre-heat the chimney duct using more paper wile igniting the fire
Too big of a fire in the furnace	Too big air supply to the furnace, too big draft, bad quality wood	Limit partially or completely the air supply to the furnace (adjustment on the ash tray façade) check if the damper is not blocked, use recommended fuel
Fire difficult to ignite	Wet wood, logs too big, bad quality wood, lack of air supply required for burning, bad draft	Use recommended fuel (hard oak wood) with appropriate moisture level, use small pieces of wood for ignition, supply adequate amount of air for burning, check if the chimney ducts are installed correctly

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